

REMARKS

Claims 20-25 are pending in the present application. Claims 1-19 were previously withdrawn subject to a restriction requirement.

Reconsideration of the application is respectfully requested in view of the following responsive remarks. For the Examiner's convenience and reference, Applicant's remarks are presented in the order in which the corresponding issues were raised in the Office Action.

In the office action of April 25, 2006, the following actions were taken:

(1) Claim 24 was rejected under 35 U.S.C. 112, first paragraph, for the use of a negative limitation.

(2) Claims 20, 21, and 23 were rejected under 35 U.S.C. 102(b) as being allegedly anticipated by U.S. Pat. Publication No. 2002/0026982 to Bredt (hereinafter "Bredt").

(3) Claims 22 and 23 were rejected under 35 U.S.C. 103(a) as being allegedly unpatentable over Bredt.

(4) Claims 24 and 25 were rejected under 35 U.S.C. 103(a) as being allegedly unpatentable over Bredt in view of U.S. Patent No. 5,204,055 to Sachs (hereinafter "Sachs")

It is respectfully submitted that the presently pending claims be reconsidered and allowed. Applicants submit that each and every amendment herein, and throughout the prosecution of the present application is fully supported by the specification as originally filed, and that no new matter has been added.

Rejection under 35 U.S.C. § 112, first paragraph

The Examiner has rejected claim 24 for use of an allegedly unsupported negative limitation. Claim 24 has been amended to eliminate the negative limitation and includes language extracted directly from the specification. The claim is fully supported in the specification on page 15 lines 1-3. As such, it is respectfully requested that this rejection be withdrawn.

Rejections under 35 U.S.C. § 102 and § 103 based on Bredt alone

The Examiner has rejected claims 20, 21, and 23 under 35 U.S.C. 102(b) and claim 22 and 23 under 35 U.S.C. 103(a) over Bredt alone. The Examiner is reminded that in order to sustain a rejection under § 102 or §103 each and every element of the rejected claims must be taught, or in the case of 103, at least suggested by the prior art.

Bredt teaches a three-dimensional printing process with multiple layering systems to construct 3D structures. The 3D structures are made by combining a particulate material, predominantly plaster, and an aqueous fluid. Layers of the mixture are formed by ink-jetting the aqueous mixture onto particulate material. However, Bredt does not teach the inclusion of inorganic phosphate particles in 3D structure.

Presently pending claim 20 claims a solid three-dimensional composition having multiple layers of cement, each of the layers of cement comprising a particulate composition including inorganic phosphate particulates. The particulate composition is hardend by the use of an ink-jettable aqueous liquid.

The Examiner has pointed to paragraph [0016] as teaching the use of calcium phosphate particulates “as a coating material.” However, paragraph [0016] is in the background section and refers specifically to a prior art patent which uses calcium phosphate. The prior art patent is in no way about ink-jet technology. Bredt contains no other discussion regarding the calcium phosphate particles outside of paragraph [0016] and additionally there is no discussion of the cited prior art reference outside paragraph [0016]. As the Examiner has pointed out, Bredt does teach a specific list of compounds which can be used as the powdered or particulate material (paragraph [0029]), specifically a number of commercially available plasters. Bredt further lists typical ingredients found in commercial plasters which can be used in Bredt. Calcium phosphate, nor any other inorganic phosphate, is listed as a commercial plaster, nor is it listed as a possible ingredient in commercial plaster for use with the invention taught by Bredt. There mere appearance of the term calcium phosphate in the background of the specification is insufficient to constitute a teaching of the element of inorganic phosphate particles present in a three-dimensional composition as described in claim 20. As such Bredt does not teach each and every element of pending claim 20.

Additionally, Applicants assert that by mentioning calcium phosphate in the background section and then not teaching it in the context of the actual invention effectively teaches taught away from its use. Why would Bredt disclose this piece of prior art and then fail to incorporate its general teachings into the described invention? Such a teaching away is a strong factor in rendering the inclusion of calcium phosphate non-obvious. At the most, the discussion of calcium phosphate in the background section might make its use obvious to try, and obvious to try is not obviousness. See Dow Chem. Co. v. American Cyanamid Co., 816 F.2d 617, 622, 2 U.S.P.Q.2d 1350, 1355 (Fed. Cir. 1987); See also Yamanouchi Pharmaceutical Co. Ltd. v. Marsam Pharmaceuticals, Inc., 231 F.3d 1339, 56 U.S.P.Q.2d 1641 (Fed. Cir.), reh'g denied, 2000 U.S. App. LEXIS 34047 (2000).

As Bredt does not teach each and every element of the pending claims, namely the inclusion of inorganic phosphate particles in the 3D composition, it is respectfully requested that the pending rejections based on Bredt alone be withdrawn and the claims be allowed.

Rejections Under 35 U.S.C. § 103 based on Bredt in view of Sachs

The Examiner has rejected claims 24 and 25 as being obvious over Bredt in view of Sachs. The Applicant respectfully submits that these claims are patentable over the cited references for the reasons set forth below.

As discussed above, Bredt does not teach the inclusion of inorganic phosphate particulates as required by claim 20 of the present invention. Such a teaching is also not found in Sachs. As such, the combination of Bredt and Sachs does not teach each and every element of the pending claims. Further, the Applicant disputes the Examiner assertion that Sachs inherently teaches pore sizes that have an average size of less than 10 microns. The mere fact that Sachs teaches that 5 micron particles can be used in either wet or dry state deposition does not mean that the surface pores formed have an average size of less than 10. For example, nothing in Sachs teaches or suggests the exclusive use of particles having sizes of 5 microns or more as it does on particles having sizes of 5 microns. Therefore, the combination of Bredt and Sachs neither teaches the inclusion of an inorganic phosphate in the 3D composition nor does it teach the element of 3D composition having pores with

average sizes of less than 10. As such, Applicants respectfully request that this rejection be withdrawn.

In view of the foregoing, Applicants believe that claims 20-25 present allowable subject matter and allowance is respectfully requested. If any impediment to the allowance of these claims remains after consideration of the above remarks, and such impediment could be removed during a telephone interview, the Examiner is invited to telephone Jeff D. Limon at (541) 715-5979 so that such issues may be resolved as expeditiously as possible.

Please charge any additional fees except for Issue Fee or credit any overpayment to Deposit Account No. 08-2025

Dated this the 21 day of July, 2006.

Respectfully submitted,



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